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detecting the passage of a trailing end of a container by detecting a decrease in magnitude of output from said laser reflection sensor, from above to below said predetermined higher magnitude and the maintenance of such magnitude of output below said predetermined higher magnitude for longer than at least the period during which one of said bar elements is detected.

REMARKS

Applicant has cancelled claims 1-5, and added new claims 6-9. Accordingly, only claims 6-9 remain in the application, of which none have been allowed. All previously claims were rejected as anticipated by Thomas (U.S. 5,637,854).

Claim 6 describes a system such as shown in applicant's Fig. 6, where cardboard boxes (e. g. 144) move in a predetermined largely horizontal direction along a defined path, and the boxes contain barcodes (140) with dark bar elements and light space elements. A box detecting circuit is constructed to generate a box-detected signal when the magnitude of output from the sensor increases from a low level (B1) representing no box to above a predetermined level (B3) which represents reflections from a box. The circuit ignores an increase in reflectance that follows a decreases in reflectance that is so brief that it indicates a bar element (130A in Fig. 5) or similar thin marking on the box. This avoids a false detection of a box when all that is detected is a dark bar element or similarly thin marking on the box.

Thomas detects polished glass tubes with barcodes 36 (his Fig. 2) having horizontally-elongated and vertically spaced bar elements, and detects high reflections from glass directly above and below the barcode label. His Fig. 4b shows that the reflection increases with every laser scan as the middle of a test

adjacent barcode bar element because that has nothing to do with his detection of a test tube. Accordingly, Thomas is not relevant to the detection of largely

horizontally moving cardboard boxes with barcodes having vertically elongated bars and spaces, and does not use applicant's technique for avoiding a false detection of the leading end of a container by the fact that the sudden increase follows a brief decrease caused by a bar element.

Claim 7, which depends from claim 6, describes the box detecting circuit as indicating detection of a box only when the magnitude of the sudden increase in reflectance remains for at least a minimum time, with only brief drops. This avoids falsely detecting the leading edge of a box when all that is detected is a space element of a barcode that has followed a dark bar element. Thomas does not do this because his detection of a test tube is based upon the characteristic gradual increase in reflectance with repeated scanning, shown in his Fig. 4b.

Claim 8 describes a system for use with box-like containers generally having front vertical surfaces and vertical barcode elements that move along a horizontal path. The system includes container detecting means constructed to detect the higher reflectance of a container surface than the space between containers, and to not mistake a barcode element for a space between containers by the small horizontal length of the vertical barcode.

Thomas does not try to avoid such mistake, but instead relies upon the pattern of gradual increase and gradual decrease as multiple scans continue, shown in his Fig. 4b.

Claim 9 describes a method for detecting the passage of leading and trailing ends of a container by detecting increases and decreases of sensor outputs. The method includes detecting a leading end of a container only when the higher reflectance magnitude continues for a predetermined period of time. The detection of the trailing end requires detection of the decreased reflectance magnitude for longer than the period of a bar element. Thomas does not use this

In view of the above, favorable reconsideration of the application is courteously requested. If the Examiner should wish to discuss the application, then the Examiner is invited to call Leon D. Rosen at (310) 477-0578.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "L. D. Rosen", written in a cursive style.

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